

Amendments to the claims

Please amend the claims as follows:

1. (Original) A method for carrying out emission spectrometry, in particular laser emission spectrometry,

in which a pulsed laser beam is focussed automatically on a workpiece to generate a laser-induced plasma,

in which the radiation emitted by the plasma is detected and elemental analysis is performed with the detected radiation spectrum,

wherein

prior to generating the plasma, in addition to determining the distance d of said auto-focussing optic from the surface of said workpiece, additional geometry parameters $P1, P2 \dots PN$ of a potential measuring location on said workpiece surface are determined,

and an elemental analysis is performed for only the potential measuring locations where at least one of said additional parameters lies within a predefined tolerance range $[T1 \dots T2]$.

2. (Original) A method according to claim 1,
wherein the angle of incline α of said workpiece surface to the axis of said laser beam present at the potential measuring location is determined as a geometric parameter.

3. (Original) A method according to claim 2,
wherein a correction of said emission spectrum is
performed if a measured angle of incline α deviates from
the predefined value α_K .
4. (Currently amended) A method according to ~~one of the claim~~[[s]] 1 [[to 3]],
wherein prior to plasma inducement, a profile of at least
part of said workpiece surface is determined by means of
a triangulation process and from said surface profile
said additional geometric parameters are calculated.
5. (Currently amended) A method according to ~~one of the claim~~[[s]] 1 [[to 4]],
wherein a plasma is induced only at those locations at
which all said predefined geometric parameters lie within
said tolerance range.
6. (Currently amended) A method according to ~~one of the claim~~[[s]] 1 [[to 5]],
wherein the predefined geometric parameters concerning
type and tolerance range correspond to those geometric
parameters of which a calibration curve had been
plotted.
7. (Currently amended) A method according to ~~one of the claim~~[[s]] 1 [[to 6]],
wherein said laser beam is deflected transverse to the
direction in which said test object is moving.
8. (Currently amended) A method according to ~~one of the claim~~[[s]] 1 [[to 7]],
wherein parts moving on a belt are measured.
9. (Currently amended) A method according to ~~one of the claim~~[[s]] 1 [[to 8]],
wherein scrap aluminum or scrap electric parts are measured.
10. (Currently amended) A method for carrying out emission spectrometry, in particular
for carrying out laser emission spectrometry according to ~~one of the preceding~~
claim[[s]] 1,

in which, to generate a laser-induced plasma, a pulsed laser beam is automatically focussed on a workpiece,

in which the radiation emitted by the plasma is detected and elemental analysis is performed using the detected radiation spectrum,

wherein

laser beam impingement occurs with an adjustable pulse interval ΔT .

11. (Original) A method according to claim 10,
wherein the ΔT values lie within a predefined tolerance range [ΔT_{\min} ... ΔT_{\max}].
12. (Currently amended) A method according to claim 10 [[or 11]],
wherein if a detection device detects a test object, a shorter pulse interval is selected than if no test object is detected.
13. (Currently amended) A method according to ~~one of the claim~~[[s]] 10 [[to 12]],
wherein if said detection device detects no test object a pump pulse is released but no laser pulse is released.
14. (Currently amended) A method according to ~~one of the claim~~[[s]] 10 [[to 13]],
wherein said pulse interval ΔT is set individually for each pulse.
15. (Currently amended) A method according to ~~one of the claim~~[[s]] 10 [[to 14]],
wherein the limits of said tolerance range ΔT_{\min} respectively ΔT_{\max} are determined individually for each pulse.
16. (Currently amended) A method according to ~~one of the claim~~[[s]] 10 [[to 15]],
wherein the pulse interval $\Delta T_{\text{average}}$ lying in temporal average varies by a desired value $\Delta T_{\text{desired}}$.

17. (Original) A device for emission spectrometry, in particular for laser emission spectrometry, comprising a pulse laser for generating a laser-induced plasma on a workpiece, an auto-focussing device for the laser beam, a detector for detecting the radiation emitted by the plasma and a device for carrying out elemental analysis,

wherein

a unit for deflecting said laser beam and/or a means for measuring the sample surface transverse to the direction in which the test object is moving are provided.